WHAT IS CLAIMED IS:

1. A method of controlling a temperature of an applicator body, the method comprising:

providing an applicator body that comprises at least one contact surface;

delivering a coolant through a conduit in at least a portion of the applicator body at a substantially constant rate;

delivering energy to at least one of the distal end of an applicator body and coolant through one or more heating elements so that the contact surface of the applicator body is cooled to a desired temperature.

2. The method of claim 1 comprising contacting the contact surfaces against a surface adjacent pelvic support tissue.

3. The method of claim 2 wherein the cooled contact surface cools the contacted tissue that is adjacent the pelvic support tissue to a temperature between 0°C and 40°C.

4. The method of claim 1 wherein the desired temperature is between about - 5°C and about 3°C.

5. The method of claim 3 wherein the desired temperature is about -2°C.

6. The method of claim 1 wherein the coolant comprises a R134a refrigerant gas.

7. The method of claim 1 wherein the contact surface comprises one or more electrodes.

8. The method of claim 7 comprising reducing a power level of the energy delivered to the heating element when a therapeutic heating energy is delivered to the one or more electrodes.

9. The method of claim 1 comprising:

monitoring a temperature of the one or more electrodes; and

adjusting a power level of the energy delivered to the heating element to maintain the contact surface of the applicator body at substantially the desired temperature.

10. The method of claim 1 wherein the heating element comprises a plurality of resistive heating elements positioned within the applicator body.

11. The method of claim 10 wherein the resistive heating element(s) contact a portion of the applicator body surrounding the coolant.

12. The method of claim 10 wherein the resistive heating element(s) may be positioned in such as way as to minimize a flow related spatial distribution of temperature across the contact surface.

13. The method of claim 12 wherein the spatial distribution of temperature across the contact surface is reduced to less than about 2 degrees Celsius.

14. The method of claim 12 wherein the resistors are chosen to be at different wattage values in such a way as to reduce a flow related spatial distribution of temperature across the contact surface while still permitting use of a single power source.

15. The method of claim 1 wherein providing the applicator body comprises providing the coolant in a path for distributing the coolant substantially evenly over the contact surface.

16. The method of claim 15 wherein the path is a serpentine path.

17. An applicator that delivers energy comprising:

an applicator body comprising a proximal portion and a distal portion;

a contact surface on the distal portion of the applicator body;

a conduit that delivers a coolant on a path through at least a part of the distal portion of the applicator body; and

one or more heating elements coupled to the distal portion of the applicator body to deliver a heating energy to the coolant in the conduit, wherein the energy is sufficient to heat the coolant so that the applicator contact surface is at a desired temperature.

18. The applicator of claim 17 wherein the contact surface comprises at least one electrode.

19. The applicator of claim 18 further comprising an RF power source coupled to the electrodes.

20. The applicator of claim 18 further comprising a control assembly that controls the delivery of the coolant and the heating element(s).

21. The applicator of claim 18 wherein the heating energy delivered to the heating element(s) is discontinued when a therapeutic energy is delivered to the electrodes.

22. The applicator of claim 17 further comprising a power supply coupled to the heating element(s), wherein the power supply is controlled with a temperature control algorithm.

23. The applicator of claim 17 wherein the heating element(s) comprises resistive heating elements.

24. The applicator of claim 23 wherein the heating elements are positioned to reduce a temperature differential across the contact surface to less than about 2 degrees Celsius.

25. The applicator of claim 23 wherein the contact surface defines a proximal end and a distal end, wherein the heating elements are positioned to deliver more energy toward the proximal end of the contact surface.

26. The applicator of claim 17 wherein a flow of the coolant is substantially constant.

27. The applicator of claim 17 wherein the desired temperature of the contact surface is between about - 5°C and about 3°C.

28. The applicator of claim 17 wherein the coolant comprises a R134a refrigerant gas.

29. The applicator of claim 17 wherein the coolant path through the distal portion of the applicator is a serpentine path.

30. The applicator of claim 17 further comprising a temperature sensor that monitors a temperature of the contact surface.

31. A system for heating a target tissue adjacent an intermediate tissue, the system comprising:

a body comprising one or more electrodes oriented for contacting the intermediate tissue;

a control system coupled to a power source and to the electrode(s), the control system adapted to selectively energize the electrode(s) so as to deliver a therapeutic heating energy through the intermediate tissue to the target tissue;

a cooling assembly configured to control a temperature of the contact surface, wherein the cooling assembly comprises:

a flow conduit positioned in the body to deliver a coolant adjacent the electrode(s);

a heating element positioned adjacent the electrode(s) and flow conduit to deliver energy to the flow conduit;

a temperature sensor positioned adjacent the electrode that measures a temperature of the electrode; and

a control assembly to selectively control the delivery of energy to the heating element and energy to the electrode(s).

32. The system of claim 31 further comprising the power source, wherein the power source is an RF power source.

33. The system of claim 31 wherein the temperature sensor comprises a thermocouple.

34. The system of claim 31 wherein the coolant comprises a R134a gas.

35. A system for controlling a temperature of an intermediate tissue contacted by a contact surface of an applicator, the system comprising:

a processor;

a memory coupled to the processor, the memory configured to store a plurality of code modules for execution by the processor, the plurality of code modules comprising:

a code module for delivering a coolant through a conduit in the applicator;

a code module for monitoring a temperature of the contact surface; and

a code module for controlling delivery of energy to a heating element that controls a temperature of the coolant adjacent the contact surface.